

Claims 1 and 17 have been amended to teach a time-temperature history having a reference of 80°F over three years, and the history may vary by increasing the temperature while decreasing the time, and decreasing the temperature while increasing the time. Claims 1 and 17 remain active in this application.

The Examiner rejected claims 1 and 17 under 35 U.S.C. 103(a) as being unpatentable over Taoukis et al. alone or further in view of Olsen et al.

Neither Taoukis et al. or Olsen et al. teach or suggest a comparator for monitoring a time-temperature history of a product, whereby the history has a reference of 80°F over three years, and the history may vary by increasing the temperature and decreasing the time, and vice-versa.

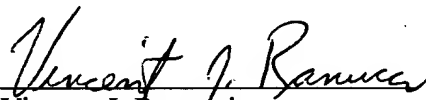
In view of Taoukis et al. and Olsen et al., it is not obvious how a comparator, as described in claims 1 and 17, can be taught by the present invention.

In view of the foregoing remarks, it is believed that Claims 1 and 17, as amended in this application are allowable and Notice to that effect is respectfully solicited.

Should the Examiner wish to contact Applicant's attorney regarding this application, the Examiner is respectfully invited to do so by calling or writing the undersigned in the Office of Counsel, U.S. Army Soldier and Biological Chemical Command, Natick, MA 01760 at (508) 233-4510.

Respectfully submitted,

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Date


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1. (Twice Amended) A comparator for use with a time-temperature indicator, said indicator for external monitoring of time-temperature history of a product, said history having a reference of 80°F over three years, whereby said history may vary such that as the temperature increases, the time decreases, and as the temperature decreases, the time increases, the time-temperature indicator having an active portion having an initial color and which undergoes chemical changes as time elapses and at a rate related to the temperature of the surrounding environment wherein the chemical changes produce changes in the color of the active portion, the comparator comprising:

a supporting member;

a plurality of comparator stages located on the support member, each comparator stage comprising a first portion having a reference color and a second portion having a predetermined color that is the same as one of the colors to which the active portion of the time-temperature indicator changes, the colors of the second portions of the comparator stages darkening in a progressive manner such that the predetermined color of the second portion of a first one of the comparator stages is substantially lighter than the reference color of the first stage and the predetermined color of the second portion of a last one of the comparator stages is substantially darker than the reference color of the last comparator stage;

information describing a condition of said product at each comparator stage; indicia

means located on the support member to facilitate identification of each stage,

said indicia means corresponding to a condition of said product at a said stage as described by the information; and

means for storing said information;

whereby a user of the comparator compares the color of the active portion of the time-temperature indicator to each comparator stage to determine if the color of the active portion is the same as the color of the second portion of any of the comparator stages; and

whereby said user correlates the indicia of the stage, having the same color as said active portion, with said storing means for accessing information corresponding to the indicia for determining the condition of the product.

17. (Twice Amended) A method of determining the time-temperature condition of a food product having applied thereto a time-temperature indicator, the indicator having an active portion having an initial color and which undergoes chemical changes as time elapses and at a rate related to the temperature of the surrounding environment, said time and temperature having a reference of 80°F over three years, whereby said time and temperature may vary such that as the temperature increases the time decreases, and as the temperature decreases, the time increases, wherein the chemical changes produces changes in color of the active portion, the method comprising the steps of:

- (a) providing a comparator comprising support member, and a plurality of comparator stages located on the support member, each comparator stage comprising a first portion having a reference color and a second portion having a predetermined color that is the same as one of the colors to which the active portion of the time-temperature indicator changes, the colors of the second portions of the comparator stages darkening in a progressive manner such that the predetermined color of the second portion of a first one of the comparator stages is substantially lighter than the reference color of the first stage and the predetermined color of

- the second portion of a last one of the comparator stages is substantially darker than the reference portion of the last comparator stage;
- (b) comparing the color of the active portion of the time-temperature indicator to the predetermined color of the second portion of each comparator stage;
 - (c) selecting the comparator stage having the second portion with the predetermined color that matches the color of the active portion of the time-temperature indicator;
 - (d) storing information describing a condition of the product, each condition being identified by an indicia identifying the condition of the product at a particular stage;
 - (e) correlating the indicia of the selected comparator stage to a particular condition of the product; and
 - (f) retrieving said stored information describing the condition of the product at the selected comparator stage.